

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 82.

Port of Detroit - Mich. Date of First Survey Mar 5, 1918 Date of Last Survey Mar 30, 1918 No. of Visits 5
 No. in on the Iron or Steel Screw Steamer "Lake Weston" Port belonging to Detroit Mich
 Reg. Book Built at Wyandotte Mich By whom Detroit Shipbuilding Co. When built 1918
 Owners U. S. Shipping Board Emergency Fleet Corp Owners' Address Washington D. C.
 Yard No. 218 Electric Light Installation fitted by Detroit Shipbuilding Co When fitted 1918

DESCRIPTION OF DYNAMO, ENGINE, ETC.

7½ K.W. Engberg Generator, Compound 4 pole, direct coupled to a single cylinder vertical enclosed type engine

Capacity of Dynamo 69 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine Room platform Whether single or double wire system is used double

Position of Main Switch Board Engine Room platform having switches to groups 14 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Crews quarters aft 4

Port Cabin 5

Star " 5

If fuses are fitted on main switch board to the cables of main circuit yes and on each auxiliary switch board to the cables of auxiliary circuits yes and at each position where a cable is branched or reduced in size yes and to each lamp circuit yes

If vessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits yes

Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of 50 per cent over the normal current

Are all fuses fitted in easily accessible positions yes Are the fuses of standard dimensions yes If wire fuses are used are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit Standard fuses

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 175 arranged in the following groups:—

A	Crews quarters aft lights each of	25	candle power requiring a total current of	4	Amperes
B	Port Cabin lights each of	25	candle power requiring a total current of	5	Amperes
C	Star " lights each of	25	candle power requiring a total current of	5	Amperes
D	✓ lights each of	✓	candle power requiring a total current of	✓	Amperes
E	✓ lights each of	✓	candle power requiring a total current of	✓	Amperes
2	Mast head light with 1 lamps each of	60 watts	candle power requiring a total current of	½	Amperes
2	Side light with 1 lamps each of	60 watts	candle power requiring a total current of	½	Amperes
4 (4 light)	Cargo lights of	100 watts	candle power, whether incandescent or arc lights	incandescent	

If arc lights, what protection is provided against fire, sparks, &c. ✓

Where are the switches controlling the masthead and side lights placed Chart Room

DESCRIPTION OF CABLES.

by see above

	Amperes	wires	each	No	S.W.G. diameter	Cir Mils	square inches total sectional area
Main cable carrying	90	2	wires, each	No 2	S.W.G. diameter,	66370	square inches total sectional area
Branch cables carrying	24	2	wires, each	No 10	S.W.G. diameter,	10380	square inches total sectional area
Branch cables carrying	24	2	wires, each	No 10	S.W.G. diameter,	10380	square inches total sectional area
Leads to lamps carrying	10	2	wires, each	No 14	S.W.G. diameter,	4107	square inches total sectional area
Cargo light cables carrying	10	2	wires, each	No 14	S.W.G. diameter,	4107	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

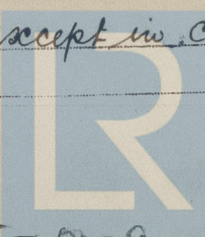
Cables. Vulcanized rubber, double braided: led through wood moulding: Elsewhere through galvanized steel conduits

Joints in cables, how made, insulated, and protected All joints soldered, taped first with rubber, then covered with friction tape & given a heavy coating of P.S. solution

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances yes Are all joints in accessible positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage yes

Are there any joints in or branches from the cable leading from dynamo to main switch board no

How are the cables led through the ship, and how protected Through steel conduits, except in cabins where wood moulding is used.



DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Yes.*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Steel Conduits*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Steel conduits*

What special protection has been provided for the cables near boiler casings

What special protection has been provided for the cables in engine room

How are cables carried through beams *Steel Conduits* through bulkheads, &c. *W.T. Steel Conduits.*

How are cables carried through decks *W.T. Steel Conduits*

Are any cables run through coal bunkers *No* or cargo spaces *Yes* or spaces which may be used for carrying cargo, stores, or baggage *No*

If so, how are they protected *Steel Conduits*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *No.*

If so, how are the lamp fittings and cable terminals specially protected

Where are the main switches and fuses for these lights fitted

If in the spaces, how are they specially protected

Are any switches or fuses fitted in bunkers *No.*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *Plugs on deck houses*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel

How are the returns from the lamps connected to the hull

Are all the joints with the hull in accessible positions

Is the installation supplied with a voltmeter *Yes.* and with an amperemeter *Yes.* fixed *Switchboard*

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas

Are any switches, fuses, or joints of cables fitted in the pump room or companion

How are the lamps specially protected in places liable to the accumulation of vapour or gas

The copper used is guaranteed to have a conductivity of not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than 500 megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

The foregoing statements are a correct description of the Electric Light installation fitted by us on this vessel and we declare that it is at this date in good order and safe working condition.

H. H. Smith. Asst Gen. Supt.

Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motors and standard compass

58 feet

Distance between dynamo or electric motors and steering compass

58 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
$\frac{1}{4}$	2	2	2
$\frac{1}{4}$	2	2	2
\checkmark	\checkmark	\checkmark	\checkmark

Have the compasses been adjusted with and without the electric installation at work at full power

The maximum deviation due to electric currents, etc., was found to be degrees on course in the case of the standard compass and degrees on course in the case of the steering compass.

Builder's Signature. Date

GENERAL REMARKS. *This installation has been fitted in accordance with the Rules, and in a satisfactory manner, the materials and workmanship are sound and good. It has been tried under working conditions and found satisfactory.*

It is submitted that

this vessel is eligible for

THE RECORD. Elec. light. *JD. 14/5/18.*

Jos. F. Rawlinson.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Elec. light

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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